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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LAO, SUE X	

ART UNIT	PAPER NUMBER
2126	32

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/959,149	LIMPRECHT ET AL.	
	Examiner	Art Unit	
	S. Lao	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-4,8-10,14-17 and 22-28* is/are allowed.

6)☒ Claim(s) *5,11-13 and 18-21* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *31*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-5, 7-28 are pending. This action is in response to the response filed 12/8/2003.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 5, 11-13, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over The Common Object Request Broker: Architecture and Specification CORBA (Revision 2.0) in view of Steinman ("Incremental State Saving in SPEEDS Using C++") and De Borst et al (U S Pat. 6,173,327)

As to claim 21, CORBA teaches (chapter 4, pages 12-16) server applications (servers, applications), executing (invoke) an application component (object) under control of an operating service (ORB), the application component having a state (context) and function code (method) for performing work responsive to a call (invoke method) from a client (client), destroying the state by the operating service (delete context object by CORBA::CTX_DELETE()). It is noted that a destroyed state in CORBA is not persistent.

CORBA does not teach (1) the step of maintaining, (2) destroying is in response to an indication from application component without action by the client.

As to (1), Steinman teaches (SPEEDS system) maintaining an object state (v1) in main memory between method invocations (between events/messages/method calls, by delta exchange method), see sections 3, 4. Given the teaching of Steinman, it would have been obvious to maintain an object state in main memory between method invocations. One of ordinary skill in the art would have been motivated to apply the teaching of Steinman to CORBA because it further improves the resource efficiency by reducing the overhead of state savings (Steinman, page 695, left col., last para.). It is noted that Steinman maintains object state without requiring an indication that work is complete.

As to (2), De Borst teaches object management, including destroying a state of an application component (destroy stream object 1391) by an operating service (dispatcher 151) in response to an indication from the application component that work is complete (when streaming is completed, as indicated by the stream returning from a completed Get operation). See col. 19, lines 1-36. It is noted that the Get operation is the work the server component performed for a client (external requestor) and returning from such a completed Get operation indicates that such work is completed. It is further noted that the object/component destruction process is in response to such returning from a completed Get operation which occurs within the server and no action by the client (external requestor) is involved. It is also noted that destroying an object is typically performed by destroying the object's state. Given the teaching of De Borst, it would have been obvious to destroy the state of the application component in response to an indication from application component but without action by the client in CORBA as modified. One of ordinary skill in the art would have been motivated to apply the teaching of De Borst to CORBA as modified because it permits protocol independent communications across heterogeneous platforms (De Borst, col. 4, lines 3-9) which is the typical operating environment of CORBA.

As to claims 18 and 13, note discussion of claim 21 and note the equivalence of discarding / destroying, and before receiving / without action by the client. CORBA further teaches (chapter 4, pages 12-16) system service (ORB) for creating and destroying. CORBA teaches (chapter 2, page 9, section 2.1.11) instance creation service (object activation), client request (request), returning a reference (generate object reference). Typically in CORBA, a client calls a object / component function indirectly by calling a stub / object adapter to initiate work (invoke object) via the run-time/system service (ORB, including object adapter) and using the reference. CORBA further teaches encapsulating function code (object method) and a processing state (context) for the work in a component (context object), providing a reference (object reference) through an operating service (CORBA) for a client program to call the function code of the component to initiate processing (invoke method) (see discussion of claim 21 with respect to CORBA).

Regarding destroying/discarding processing state responsive to indication from the component that processing/work is complete and without action from the client, this is met by De Borst, as discussed for claim 21. In particular, the Get operation is the work the server component performed for a client (external requestor) and returning from a completed Get operation indicates that such work is completed. The object/component destruction process in De Borst is in response to such returning from a completed Get operation which occurs within the server and no action by the client (external requestor) is involved.

As to claims 19-20, holding a reference and releasing a reference are part of the conventional object creation and destruction. Further, CORBA as modified teaches (Steinman) resetting the state (restore state by calling exchange again, section 4). The factory mechanism of CORBA produces a component/object instance and its pointer. When an object is reused, its state is typically reset/reinitialized. As to claim 11, holding a reference and releasing a reference are conventional means for object creation and destruction.

As to claim 5, note discussion of claims 21 and 18, and CORBA teaches (discussion of claim 1) run-time service (ORB) for executing and destroying. CORBA further teaches (chapter 2, page 9, section 2.1.11) instance creation service (object activation), client request (request), return a reference (generate object reference). Typically in CORBA, a client calls object/component functions indirectly by calling a stub which is a form of object adapter to initiate work (invoke object) through the run-time service (ORB, including object adapter) using the reference (stub). De Borst teaches destroying the component's state on the component returning from a call by the client without action by the client, as discussed in detail in the rejection of claim 21.

As to claim 11, holding a reference and releasing a reference are conventional means for object creation and destruction.

As to claim 12, CORBA as modified teaches (Steinman) resetting the state (restore state by calling exchange again, section 4).

4. Claims 1-4, 8-10, 14-17 and 22-28 are allowed.

5. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Applicant's arguments filed 12/8/2003 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Sue Lao Sue Lao
February 16, 2004